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NORTHEASTERN FOREST PEST REPORTER

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Northeastern Forest Experiment Station

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This is the first number of the NORTHEASTERN FOREST PEST REPORTER in the 1957 series. If the volume and diversity of forest insect and disease activities reported thus far are any indication, this will be a busy season indeed for all of us.

FOREST INSECTS

PINE SAWFLIES A total of 1,494,000 acres in eastern Maryland was surveyed from the air for Neodiprion pratti pratti by personnel of the Beltsville Forest Insect Laboratory and the Virginia Pine-Hardwood Research Center (NEFES). Approximately 14% of this area, or 210,000 acres, is in pine type and showed evidence of defoliation. This represents a considerable consolidation and spread of the 1956 infestation. Although no extensive area of severe feeding was recorded, complete stripping and some tree mortality was noted in spots. Neodiprion pratti paradoxicus continues in abundance in southern New Jersey. Pitch and, to a lesser extent, shortleaf pines are defoliated over a wide area. Occasional planted red, loblolly, jack, and ponderosa pines have also been attacked. The redheaded pine sawfly, N. lecontei, is reported active in New Jersey also. Infestations of the European pine sawfly, N. sertifer, appear to be increasing in severity and extent in southern Connecticut and southeastern New York. Red, scotch, and jack pines are attacked. This pest, or a close relative, is reported abundant on red and scotch pines in Monroe and Carbon Counties, Pennsylvania. Cocooning there was well along by June 12. The red pine sawfly, N. nanulus, is present in noticeable numbers in approximately 2000 acres of red pine plantations in St. Lawrence County, New York. As indicated by last year's egg counts, a heavy infestation is present in the sequential sampling study plot.

SPRUCE BUDWORM (Choristoneura fumiferana) Light to heavy populations have been found over more than 3,000,000 acres in northern Maine as predicted by the 1956 egg mass survey. Large areas of fir are now threatened. An extensive survey is in progress, with special sample collections of small larvae in buds, large larvae and pupae, and egg masses to be examined and tabulated at three field laboratories. A budworm, Choristoneura sp., was found feeding on Virginia pine staminate flowers at Blain and Bedford, Pennsylvania. The caterpillars were in the 3rd, 4th, and 5th instars on May 15, not numerous.

PINE LEAF APHID (Pineus pinifoliae) Populations causing galls on red spruce in most areas this year. Galls were apparent in eastern and western Maine by May 17, reported opening in first half of June with crawlers now on the tips of white pine. Serious infestations with a similar pattern are present in New York and Vermont. An airplane spraying test is planned in Vermont, using Malathion and BHC with the extender Aroclor and DDT. Another gall-former on spruce and tip-feeder on white pine, Pineus floccus, is causing exceptionally severe damage to red spruce in Vermont. It has been reported frequently from New York also.

PINE NEEDLE MINER (Exoteleia pinifoliella) Very prevalent on pitch and shortleaf pine in central and southern New Jersey -- intermingled to some extent with the sawfly Neodiprion pratti paradoxicus.

BALSAM WOOLLY APHID (Chermes piceae) Continuing as a serious threat to fir stands in the White Mountain and Green Mountain National Forests. In the Mill Brook area of the White Mountains, all of the merchantable fir has been sold and is now being cut.

WHITE PINE WEEVIL (Pissodes strobi) Approximately 980 acres of infested white pine plantations in northern New York were sprayed in mid-April by airplane. DDT was applied at the rate of 4 lbs. in 4 gallons of oil solution per acre. This was a joint undertaking of the New York State Conservation Department and the U.S.Forest Service.

PINE TORTOISE SCALE (Toumeyella numismaticum) Generally distributed on Virginia pine in southcentral Pennsylvania, present in noticeable numbers in West Virginia and western Maryland, and very abundant in and around the Agricultural Research Center at Beltsville, Maryland. On May 11, 25 acres in Beltsville were sprayed with Malathion by airplane at the rate of 1 lb. in 2 gallons of oil solution per acre. During the week of May 20, a 5% Malathion emulsion was applied by mist blower over 20 acres of infested Virginia pine in the Shawnee State Park in Pennsylvania. Both operations were timed to hit the crawlers. Final results not reported as yet. Cooperative ground spray tests were conducted this spring, also, by the University of West Virginia and the West Virginia Pulp and Paper Co.

MISCELLANEOUS INSECTS ON CONIFERS White pine aphid (Cinara strobi) very abundant on white pine in central and southern Maine. Bagworm (Thyridopteryx ephemeraeformis) noted on white and red cedars throughout southern New Jersey -- continuation of heavy infestation in 1956. Pine spittlebug (Aphrophora parallela) populations reported light on Virginia and scotch pines and Japanese larch in southcentral Pennsylvania -- very noticeable on pitch, shortleaf, and planted loblolly pines in certain sections of southern New Jersey -- medium to heavy infestations on scotch pine in western New York (District 4), with heavy infestations on white pine reported from Oswego County -- light to severe injury to pines in Mineral, Hardy, and Monongalia Counties, West Virginia. The white triangle leaf roller (Archips persicana) is of unusually frequent occurrence on balsam fir in Maine. A pine tip moth (Rhyacionia rigidana) was found tunneling in tips of numerous scotch pines in Berks, Bedford, and Westmoreland Counties, Pennsylvania. Heavy infestations of the pine needle scale (Phenacaspis pinifoliae) were noted at North Providence and Johnson, Rhode Island. Light feeding on hemlock by the blackheaded budworm (Acleris variana) was reported in several counties in West Virginia.

FALL CANKERWORM (Alsophila pometaria) A reconnaissance survey of Sugarloaf Mountain, Maryland, in late April revealed an increase of the 1956 600-acre infestation to over 1000 acres. Chestnut oak, which predominates, was almost completely stripped by the first week in May and associated oak species were severely defoliated. Little or no feeding was observed on scattered maple, yellow poplar, gum, and dogwood trees. Limited roadside spraying of DDT with mist blower was recommended for control where protection of foliage was deemed advisable. Approximately 1000 acres were sprayed from the air for control of this pest in Warren, Maine.

SADDLED PROMINENT (Heterocampa guttivitta) No recurrence of the severe defoliation of 1956 in eastern Rensselaer County, New York has occurred. In adjoining Berkshire County, Massachusetts, the infestation has subsided greatly; only spot spraying there is contemplated.

FOREST TENT CATERPILLAR (Malacosoma disstria) Reported present in considerable numbers for the second successive year on the Monongahela National Forest in West Virginia.

PERIODICAL CICADA (Magicicada septendecim) Brood XIV is occurring in West Virginia this year right on schedule. This particular brood is more prevalent in the southwestern counties of the State and in a portion of the Eastern Panhandle. Widespread twig mortality to hardwoods, primarily red and chestnut oaks, is reported throughout central Pennsylvania.

MAPLE LEAF CUTTER (Paraclemensia acerifoliella) Populations apparently still high in Vermont. Numerous adults were observed in mid-May on sugar maple throughout the State and application of a 9% DDT oil solution at the rate of 2 gallons per acre in early August last year gave very good control of the insect in selected stands. Control measures are contemplated again this year in areas where necessary.

GYPSY MOTH (Porthetria dispar) The large-scale Federal spray program aimed at eradication of the gypsy moth in the tri-state area of New York, New Jersey, and Pennsylvania was started on April 22 and completed on June 14. A total of 2,902,517 acres were sprayed with 2,484,494 gallons of 12% DDT solution. Other cooperative eradication spraying included an additional 105,820 acres in an adjacent area in Pennsylvania and 18,880 acres in the Lansing, Michigan, area, where 99,914 and 11,020 gallons of spray, respectively, were applied. Additional suppression treatments were applied by State agencies in New York and several New England states to reduce populations and prevent defoliation and damage in heavily infested areas.

FOREST DISEASES

BLISTER RUST OF WHITE PINE (Cronartium ribicola) Heavy aecial production has been noted in certain localities during rainy periods in early May. If the hot dry weather does not adversely affect the further development of the rust, this heavy aecial production may indicate an increase in the incidence of rust in certain northeastern localities. New York reports that approximately 400,000 acres of control area has been scheduled for examination during 1957. It is estimated that roughly 30% of this acreage, or 125,000 acres, will be in need of Ribes eradication efforts. Aecial production appeared quite heavy for the second year in a row. Early reports and observations indicate that Ribes will be heavily infected with rust by midsummer.

NEEDLE RUST (Coleosporium solidaginis) This rust has been reported on red pine from 2 localities in West Virginia. It is also increasing in incidence in young plantations of red pine in Vermont. West Virginia also reports a fungus causing a cankerous condition in one planting of presumably red pine, which may be due to another species of rust attacking red pine. New York reports a very heavy needle rust on red pine. Coleosporium solidaginis has been reported from areas generally throughout the state.

MISCELLANEOUS RUSTS - RUST OF GROUND OR CREEPING JUNIPER (Gymnosporangium clavariaeforme) and WITCHES' BROOM ON VACCINIUM (Calyptospora goeppertiana) The Juniper rust was fruiting abundantly, common and widespread throughout eastern Maine during mid May. Alternate hosts of the fungus are serviceberry, chokeberry, pear, and quince. The Vaccinium rust during early May was observed to be abundant in north central Massachusetts. Fresh telial brooms were common; the alternate host is reputed to be the true firs.

The abundance of the fruiting stages of the above miscellaneous rusts, together with observations on abundance of aecial production in white pine blister rust, and the reports of needle rust on red pine may indicate that 1957 may be a high incidence year for the tree rusts. The incidence of the rust diseases, however, may be curtailed by the exceptionally dry weather in reducing infections on their respective alternate hosts. Further observations will be necessary to elucidate this point.

NEEDLE CAST DISEASES OF DOUGLAS FIR (Rhabdocline pseudotsugae and Adelopus gäumanni) Both of these fungi affecting plantings of Douglas-fir Christmas tree stock may prove to be the limiting factor in the success of such plantings, according to information received from Vermont. Both fungi were actively fruiting on the browned needles of Douglas-fir this spring.

ROOT ROT (Fomes annosus) Connecticut reports dying of red pine in "Peoples Forest" near Barkhamsted, Connecticut. The stand was thinned about 2 years ago and the trees are 25 to 35 years old. The new dying is probably less this year than it has been in the past 2 years. Dying red pines is not limited to this one locality but occurs scattered throughout the state. New York reports 4 red pines were found dead in State Reforestation Area No. 1, Allegheny County. Mortality appears due to F. annosus but verification is pending culture of specimens sent to Dr. Welch at Cornell University.

ANTHRACNOSE OF OAK AND SYCAMORE (Gnomonia veneta) The exceptionally dry weather will probably operate in reducing the severity of anthracnose this year. However, some activity has been noted on sycamores and a severe infection of pin oak has been reported from Connecticut. To our knowledge, pin oak infections have not been very common.

NECTRIA CANKERS (Nectria galligena) Common and widespread on hardwoods, severe infections of black birch were noted in north central Massachusetts. Its incidence appears to be increasing in some areas, especially on trembling aspen and black birch.

BEECH BARK DISEASE (Nectria coccinea var. faginata following infections of the woolly beech scale Cryptococcus fagi) This disease complex continues in fairly heavy proportions on the White Mountain National Forest where attempts to cut mature and over mature beech for timber sales is encouraged as much as possible.

CYTOSPORA CANKER OF SPRUCE New York reports that Cytospora canker is still causing mortality of Norway spruce throughout the state.

BLACK KNOT OF CHERRIES (Dibotryon morbosum) This is a widespread and common disease, but many freshly forming cankers were observed in southern and eastern Maine and in north central Massachusetts during early May. Numerous small branch cankers on wild cherries were observed as usual, but many large trunk cankers were also observed on black cherry in Maine. Its incidence may be increasing.

BLUE STAIN (Ceratocystis sp.) Blue-stained red pine is reported from eastern Schuylkill County of Pennsylvania. The blue stain accompanies and follows infections of the bark beetle (Ips pini) which attacked the pine in this locality.

WOOD ROTS The exceptionally dry spring and early summer seems to have had some effect on the repression of early fruiting of many wood rotting fungi. Limited observations have shown some new growth of a few of the common wood rotters such as Fomes pini on shortleaf pine in New Jersey, F. igniarius on maples in Massachusetts and Maine, F. igniarius var. laevigatus on white birch in Massachusetts, F. annosus conks were just putting on limited new growth on infected red pine stumps in Massachusetts by mid-May, Trametes suaveolens was observed on willows in Maine, Fomes connatus was observed on red maple in Massachusetts, and F. pinicola fruits were apparently putting on new growth in scattered localities throughout the Northeast.

ASH LEAF RUST (Puccinia peridermiospora) Maine reports that ash leaf rust is again abundant in the coastal regions. It is now in its pycnial stage (6-21-57), although aecial production is now forming.

ASH ANTHRACNOSE This disease is also abundant in local regions of southern Maine.

LEAF SPOTS Some leaf spots, the causal organism not being specified, are reported as showing up in southern New Hampshire.

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The following lists some observations of diseases of unknown causes and non-parasitic tree troubles.

WHITE PINE NEEDLE BLIGHT Appears to be common in Pennsylvania and especially noticeable near Pine Grove Furnace. It was also observed in Maine. A condition similar to white pine blight has been widely observed in New England states on young roadside white pines, which probably is related both to winter injury of the young trees growing on exposed roadside banks and with salt injury also a factor in the production of the symptoms. It is expected that 1957 may show an increase in the severity of white pine needle blight.

BIRCH DIEBACK It is reported from New Hampshire that this trouble appears to be decreasing and some trees appear to be recovering from the dieback condition.

RESINOSIS, OR PITCH BLEEDING OF WHITE PINE Specimens of the trouble were observed in Maine. Symptoms seem to have originated from more than basic cause, such as insect attack, Caliciopsis pinea -- a weakly parasitic fungus, and perhaps other undiscovered causes. New York reports that the cause of pitch flow on white pines continues to go unanswered. Concern over possible damage to pine stands is gaining momentum among foresters and the public in general. Some information in regard to cause, damage, and methods of control would be most welcome.

OAK DIEBACK Continued mortality of red oak dieback is reported from Pennsylvania. Additional losses are expected from West Virginia, where salvage operations are designed to reduce such losses.

FROST INJURY A freeze occurring on May 17 in Maine, New Hampshire, and Vermont affected a number of species, including oak, beech, ash, butternut, black locust, and shagbark hickory. It was reported throughout central and southern sections of Vermont and from localized areas of southern New Hampshire. In sections of the southern part of the White Mountains a high proportion of hillside beech was browned and had the appearance of early fall foliage. It was noticeable from Concord, New Hampshire extending north pretty well through the White Mountains and even further north in the valleys of the Connecticut and Merrimack rivers. Pennsylvania also reported heavy frost damage during early May. Late frosts in May have again caused widespread killing of new leaves on oak, beech, and ash throughout most of New York state.

WINTER BURN Light to moderate winter injury is reported from some sections of Vermont on hemlock and red pine.

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